

# The psychedelic mind: Current user perceptions of psychedelic drugs and their use

Sarah McGruddy, Jai Whelan, Ethan Mills, Alexander Boardman and Ryan D. Ward

## Abstract

**Purpose** – Psychedelic drugs can induce altered states of consciousness characterised by changes in visual perception, tactile sensation, cognition, and emotion. Although there is a history of misinformation surrounding these drugs, recent investigation has reinvigorated interest. However, little research has assessed the attitudes of psychedelic consumers regarding these substances. The current study aims to explore the attitudes and perceptions of people with experience with psychedelic drugs, specifically surrounding psychedelic drugs themselves and their use within Aotearoa New Zealand.

**Design/methodology/approach** – Nineteen individuals with experience of psychedelic use were recruited to participate across eight groups in semi-structured, exploratory interviews, where a range of topics associated with psychedelics were discussed. Reflexive thematic analysis of the data focussed on participants' current perceptions and attitudes.

**Findings** – Four themes were produced: (1) a negative historical influence on current perceptions of psychedelics; (2) knowledge is key but not everyone has it; (3) prohibition is not working, policy needs to change; (4) psychedelics have therapeutic potential. These themes emphasise key features of people with experience of psychedelic drugs' current views and highlight potential areas for future investigation and intervention.

**Social implications** – Findings indicate a need for greater public knowledge and awareness of psychedelics in Aotearoa society. Findings also inform information, education and policy, which in turn will reduce the stigma and associated harm that those who have used or use psychedelic drugs may experience.

**Originality/value** – To the best of the authors' knowledge, qualitative research aiming to understand attitudes and perspectives surrounding psychedelic drugs and their use from a drug users' perspective have not yet been assessed.

**Keywords** Psychedelic users, User perceptions, Stigma, Therapeutic drug use, Education, Policy

**Paper type** Research paper

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Psychedelic drugs activate the serotonin 2A receptor (5-HT<sub>2A</sub>) and induce experiences of euphoria and altered sensory perception (Carhart-Harris and Goodwin, 2017). These substances have resurged both in academic and medicinal research over the past 20 years, and also recreationally. However, while psychedelics have shown great potential to be incorporated into Western medicine, the information surrounding these substances is intertwined with controversy (Schlag *et al.*, 2022).

In recent history, psychedelic use has been associated with youthful rebellion and counter-culture movements – initiating a negative stigma towards those identifying with this culture. This was followed by the Controlled Substances Act in 1971, where LSD, psilocybin, and all other psychedelic substances were deemed Schedule 1 illegal drugs (Carhart-Harris and Goodwin, 2017). In Aotearoa New Zealand (hereafter Aotearoa) all use, possession, cultivation or dealing of psychedelics are prohibited under a class A schedule (Misuse of

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[Drugs Act, 1975](#)). The severe legal implications and negative connotations of psychedelic use has likely added to public perceptions of caution towards the substances. Despite this, recent population-level data has shown that approximately 2.5% of people aged 15 years or older have consumed a hallucinogen (including ketamine) in the past 12 months ([Ministry of Health, 2022](#)). Some have characterised the current climate as a “third wave” of psychedelic exploration due to the increased media attention and public awareness ([Sellers and Romach, 2023](#); [Yaden et al., 2022](#)). A recent drug harm ranking study concluded that hallucinogens are some of the least harmful substances in the country, scoring a total of 4 harm points out of a possible 100 ([Crossin et al., 2023](#)). This recent assessment of the harms associated with psychedelics, in addition to recent studies showing their utility in treatment of a variety of clinical conditions ([Murphy et al., 2021](#); [Gukasyan et al., 2022](#)), indicates the need to reassess attitudes towards these substances, particularly as these types of therapies and use becomes more widespread. Such assessment could provide a barometer of the public's readiness to embrace the use of these drugs in a therapeutic setting.

Attitudes towards psychedelic drugs have been assessed from clinical psychologists ([Davis et al., 2021](#)), counsellors ([Hearn et al., 2022](#)), psychiatrists ([Barnett et al., 2018](#)), experts in serious illness care ([Beaussant et al., 2020](#)), and individuals that use mental health services ([Corrigan et al., 2022](#)). The focus of these studies has been primarily on psychedelic use in a therapeutic context, with most results indicating a wariness about use and a general consensus that more research needs to be conducted ([Davis et al., 2021](#); [Hearn et al., 2022](#); [Beaussant et al., 2020](#)). The apprehensive attitude of most participants in these studies indicates a lingering misunderstanding of these substances. In Aotearoa, attitudes of cancer health-care workers towards psychedelics have only been assessed in regard to psychedelic-assisted therapy ([Reynolds et al., 2022](#), [Reynolds et al., 2021](#)).

Investigations of people who use psychedelic drugs in naturalistic settings have primarily considered their motives behind substance use ([Móro et al., 2011](#)), and psychedelic drug self-care practices ([Soares et al., 2022](#)). Qualitatively, their experiences of microdosing ([Webb et al., 2019](#)) and ‘bad trips’ have also been assessed ([Gashi et al., 2021](#)), alongside attitudes towards use in psychedelic-assisted therapy from patients with specific diagnoses ([Wells et al., 2024](#)). Despite these recent studies, [Móro and colleagues \(2011\)](#) highlight that academic discussion around drug use often does not include accounts from drug users, with the exception of extreme cases which are abundantly negative ([Barrett et al., 2016](#); [Carbonaro et al., 2016](#)).

Typically, non-problematic drug users (the vast majority of those who use; [Schlag, 2020](#)) are just that – non-problematic. They pose little risk to themselves, others and society, leading to little motivation to study them and little interest in their point of view ([Móro et al., 2011](#)). However, these individuals have first-hand experience with these rather controversial substances, and their lived experience ought to be valued and investigated ([Souleymanov et al., 2016](#)). It is therefore important to understand their perspectives, where their ideas come from, and their overall attitudes and perspectives related to psychedelic drugs. Inclusion of perspectives of those with first-hand experience in research as per the “Nothing About Us, Without Us” movement – originating from disability activism – suggests that those who will be directly affected by public opinion and policy must be represented within the work ([Yeo and Moore, 2003](#)). Within the context of drug use, this approach indicates the importance of allowing drug policy to consider the lived experience and perspectives of those who use drugs. Further, exploring their current knowledge of these substances can provide an indication as to what education may be necessary, how educational and harm reduction programmes could be best implemented, or perspectives associated with stigma towards consumers of these substances. Presently, psychedelics are used with limited legal consequences in some countries, but are generally illicit; however, those who use in legal settings still report feeling guilty and misunderstood for their use ([Jilka et al., 2021](#)). As

stigma and marginalisation can lead to harm (Room, 2005), it is necessary to understand the stigma these individuals experience to reduce harm.

Little investigation of those who use psychedelic's perceptions, has left a gap in understanding that could have implications at an individual and societal level if filled – informing legal classification and broader national drug policies. Therefore, the current study aimed to investigate the current attitudes and perceptions of those who use and have used psychedelic drugs, specifically surrounding psychedelic drugs and their use in Aotearoa. Views on the substances and their use were investigated through semi-structured, exploratory group discussions, which promoted a broad discourse regarding psychedelic substances.

## Method

### Recruitment and participants

Ethical approval for this study was obtained from the University of Otago Human Ethics Committee (ET22/034). Participants were recruited from the Ōtepoti/Dunedin area via advertisements which were circulated in public locations such as university campuses, supermarkets, cafes, and online groups/pages. The advertisement asked for individuals aged 18 or older, who had used psychedelics at least once and lived in New Zealand for at least a year, to provide local context to the results. Through snowball-like recruitment, participants further enlisted a group of friends who also met the requirements. Nineteen participants, aged between 18 and 44 (*Median* = 22) took part in this study (see Table 1). Other demographic

**Table 1** Participant demographic information

<i>Interview ID</i>	<i>Age (rounded)</i>	<i>Gender</i>	<i>Approximate psychedelic use occasions</i>	<i>Classical psychedelics used</i>	<i>Other drugs ever used recreationally*</i>
A1	37	W	6	LSD, mushrooms	2
A2	44	M	25	LSD, mushrooms	1
B1	26	W	13	LSD, mushrooms	8
B2	26	W	20	LSD, mushrooms	9
B3	26	M	3	LSD	5
B4	25	M	20	LSD, mushrooms	6
C1	22	M	7	LSD, mushrooms	4
D1	18	M	4	LSD, mescaline (San Pedro), mushrooms	3
E1	29	W	5	Dimethyltryptamine, mescaline (San Pedro), mushrooms	2
F1	22	M	30	Dimethyltryptamine, LSD, mushrooms	7
F2	22	M	2	Mushrooms	5
F3	22	M	3	LSD, mushrooms	3
F4	22	M	8	Mushrooms	6
G1	19	M	3	LSD	2
G2	21	M	8	Dimethyltryptamine (ayahuasca), LSD, mushrooms	6
G3	20	M	5	LSD	7
G4	20	M	8	LSD, mushrooms	3
H1	19	M	3	LSD	7
H2	19	M	4	LSD	8

**Notes:** Other drugs included 2-CB, alkyl nitrites (poppers), alprazolam, amphetamines, cathinone, cannabis, cocaine, GBL, kava, ketamine, MDMA, methylphenidate, nitrous oxide, opioids (tramadol, codeine, methadone), salvia, zolpidem and zopiclone. Caffeine, nicotine and alcohol are omitted

**Source:** Table by authors

information such as sexual orientation, ethnicity, and education level were also collected to provide context for the participants' psychedelic experiences. Participants sexual orientations included heterosexual, bisexual, queer, and those who did not disclose. Participants primarily reported being of New Zealand European/Pākehā ethnicity ( $n= 17$ ), but also Māori ( $n= 2$ ), Danish ( $n= 1$ ), European ( $n= 1$ ), and Lebanese ( $n= 1$ ). Participants included in this analysis were recruited between May-August 2022. Prior relationships between participants indicated shared life experiences and an already established familiarity and comfortability in conversation. There was a total of eight discussions. Participants were reimbursed for their time with \$25 NZD supermarket vouchers.

### *Procedure*

Prior to recruitment and throughout the investigation, researchers underwent a reflexive process identifying preconceptions and biases that might influence the development of research materials, moderation of focus groups and analysis of results. This included acknowledging gender, ethnicity, age, academic background, and personal life experience. Researchers involved in data collection and analysis were New Zealand European/Pākehā, Māori, South African, and American, with four males and one female. In context of the current paper, all researchers were opposed to punishment for consumption of psychedelic substances based on principles of personal autonomy.

Following recruitment, discussions were held either on the University of Otago campus or at the participants' place of residence. At least two researchers were present for each interview, where the primary facilitator alternated between three male and one female researcher. Prior to interview commencement, participants read through the ground rules and added their own if so desired. Ground rules encouraged open, non-judgemental conversation and the option to abstain from answering specific questions/topics if one so desired was given (e.g. "do not pressure others to share when they are not comfortable"). Once verbal consent to these rules was given and the option to withdraw at any time affirmed, verbal consent was recorded and the group began.

Interviews were conducted in groups of 1–4 individuals, and were semi-structured and exploratory, where open-ended questions were used to allow for open discourse. The question guide was structured for analysis of a larger project focussed on psychedelic use in Aotearoa; questions used in the current study's analysis pertained to motivations for use, attitudes and perceptions around use and the participants' knowledge about potential harms from use (see Supplementary). Early versions of these questions were piloted and adjusted to improve conversation flow and comfort of participants. Researchers followed the natural flow of conversation with explorative questions to evoke further thought, and only redirected conversation when discourse moved away from the topics of interest. Once interviews ended, participants were debriefed and given a resource document which included the contacts of various services and website links related to drugs and drug harm reduction. During the interview, any inaccurate information or knowledge was noted down by the researchers and brought up again at the conclusion of the interview to correct said information and build upon it so that participants were better informed about psychedelic (and other drug) use and harm reduction through participation. For example, if a participant were to say that LSD is stored in the spinal cord, this would be corrected.

Groups lasted between approximately 90–150min, and audio was recorded on a secure dictation device for later transcription. The interviews were initially transcribed via Otter software (Otter.ai), which was manually compared to the audio by the researchers and edited where necessary. Any identifying information was omitted from transcripts to maintain participants' anonymity.

## Data analysis

The interviews covered a wide range of topics related to psychedelics. The current analysis focussed on sections of the transcript that pertained to current attitudes and perceptions surrounding psychedelic drug use in Aotearoa. The data set was managed and analysed in the software programme NVivo 1.6.1 (QSR International). An inductive, data-driven approach was taken, whereby semantic content had the same value as latent constructs that were formed based on the participants' discourse. Any identifying material was omitted using pseudonyms, and some quotes were edited for clarity, brevity, and ease of reading.

Reflexive thematic analysis (Braun and Clarke, 2006, 2019) was used as it has been effectively shown to be well-suited for group interviews surrounding people's views and experiences on a range of topics (Adams *et al.*, 2014; Cowie and Braun, 2021; Malik and Coulson, 2008; McDonald and Braun, 2022). The analysis in the current study was informed by a critical realist position (Madill *et al.*, 2000), which posits that participant's interpretations of personal events and experiences have basis in reality but are undeniably shaped by the wider sociocultural context. Participants' accounts were taken as representing their true perspectives and were interpreted by the researchers in this way.

Analysis began with reading over the transcripts to become familiarised with the data (Braun and Clarke, 2006, 2019). Initial inductive coding of the data set was then carried out by the lead author. Initial codes were clustered based on patterned discourse and refined into seven broad themes. The themes were further developed through a recursive process and provisional themes were reviewed at multiple stages by members of the research team, to ensure they reflected the data in an accurate and meaningful way. Once themes were agreed upon as being salient within the data, the content was checked to match the theme meaning and names and the final themes were confirmed; reflecting the evolving and reiterative nature of theme generation and refinement that ensures critical appraisal of the data and interpretation at every step of the process.

## Results

We begin by providing some contextual discussion of participant's psychedelic experiences. Experiences were generally influenced by initial motivation prior to consumption. Motivations for consuming psychedelics included for recreational/party use, spiritual understanding, personal growth, and addressing mental health concerns. Despite the range of psychedelic experiences, both positive and negative, relatively consistent attitudes were held towards the substances. Participants shared commonality in what led to their positive or negative experiences – which directly contributed to their perceptions of the drug and its use. Notably, participants did not view psychedelics as harmful in and of themselves: "I don't think any substance in and of itself is harmful, so much as like user error with it is definitely harmful" (B2). Participants regularly emphasised the importance of "set and setting" (Zinberg, 1986) in determining whether a psychedelic experience will be good or bad. Setting considerations that participants perceived to be important included feeling physically "safe and comfortable" (A2), avoiding crowds that were "overstimulating" (B1) and most importantly being surrounded by people they trusted. This also involved having a "trip sitter" – "a sober person who's not on psychedelics" (B1) – which most participants perceived to reduce anxiety, thus facilitating a positive experience. Participants also frequently discussed the importance of an appropriate mind set, not being stressed, and embracing their experience. "Oh yeah mushrooms are my friend, I'll just wait till I'm in the right frame of mind" (E1). Going into a psychedelic experience with a positive mind set was important to most participants. Another factor that participants agreed impacted the overall psychedelic experience was dosage. In particular, participants advocated for using a small dosage for the first experience and not overdoing it. High doses of psychedelics or mixing with other drugs were often associated with negative experiences – "when you take

too much, you don't know what's real life and what's not. That's quite scary." (C1). Overall, participants agreed as to the factors that contributed to either a positive or negative psychedelic experience.

For the present study, we explored our participants' general attitudes and perceptions of psychedelics and their use. Four key themes were developed through the analytic process:

1. a negative historical influence on current perceptions of psychedelics;
2. knowledge is key but not everyone has it;
3. prohibition is not working; policy needs to change; and
4. psychedelics have therapeutic potential.

### *Theme 1: a negative historical influence on current perceptions of psychedelics*

Psychedelics come with a past. They have been associated with individuals who prescribe to anti-conformity ideologies and were heavily involved in the counterculture movements in the 1960s, especially anti-Vietnam War. Most participants were aware to varying degrees of these associations, and felt these attachments were predominantly negative and not reflective of the true nature of psychedelics – as mind expanding substances. Participants perceived that psychedelic use in the past could be described as non-conforming and “exploratory” (F4), where people wanted to exist “outside of a cookie cutter version” (F1) of what they were told they were supposed to be. Participants perceived that attitudes at the time were that “if you did drugs you were against the government” (G1), in particular, the Nixon administration. Multiple references to the War on Drugs were made, and the perception was that the government's attitude at the time was that “drugs are a massive problem” (G4).

The anti-drug propaganda created a “big scary reputation” (B1) surrounding psychedelics, where myths were spread such as “people think they can fly and jump off buildings” (B4) and causing “permanent psychosis” (B2). Attitudes between participants were fairly consistent as to the amount of misleading or incorrect information surrounding psychedelics, to the extent that one participant said “it's not even like misinformation. It's just straight up lies” (H2). Some participants also expressed concern that the magnitude of incorrect information that exists distracts from knowledge of the real risks of psychedelic use. Participants felt public stigma was most reinforced by regulatory systems such as schools and governments, and the false information was spread by traditional media and the general public:

I don't understand why [...] they try to scare people with all sorts of risks they make up which is stupid, because there are plenty of scary enough risks that actually exist. So, you don't need to make up anything. (D1)

Participants perceived that the misinformation campaigns surrounding psychedelic drug use were so effective, that they still have lasting effects on other people's opinions today. Participants often referred to the generation raised during this era as having a “collective boomer consciousness” (F4) – whereby “Boomer” is a colloquial term used to describe people born after the Second World War between 1946 and 1964 – and holding an “old thought process” (H2) with misconceptions that are out of date:

Yeah, just like a whole load of [...] information that got put out there. And I guess it's just like, once you've been told something, you know, for a huge number of years, it can be like, hard to just change that, you know, that sort of idea if they've always thought that drugs are like dangerous, and, you know? (G2)

Participants perceived that once a negative opinion of psychedelics – that stemmed from misinformation – was established in others, it was difficult to reduce this prejudice. This was because years of support have solidified this viewpoint, ingraining it in society as an

acceptable and normative way of thinking. A generational cycle of information sharing was perceived to enforce this bias, whereby “if you ask your parents, it’s come from their parents” (H2). Younger participants in particular expressed concern about judgement from older family members, but not so much from peers their own age – “when I told my mum she freaked out, like, compared to when I told other people, my age” (F1):

Just cause you do [...] acid, you’re not like a villain, you’re not a bad person, which is, you know like, there’s, there is quite a stigma in society today that, you know, that makes those people out to be bad people. (G3)

Despite the War on Drugs being perceived as a strong contributor to this stigma, less direct influences were also mentioned. Participants perceived stigma towards those who use psychedelic substances to also stem from racist ideologies, relations to criminal activity, and association with other illicit drugs:

Like, like it’s seen, I think particularly because it is a Class A that people like put on the same like level of like, meth or cocaine and they’re like, oh my gosh, that’s such a hardcore drug. Where like, it isn’t really. (B1)

(F2) mockingly asked himself, “you injecting mushrooms again, are you?”, illustrating the perceived level of misunderstanding that surrounds psychedelics in society today; psychedelics are often associated with “worse”, “top-tier”, or “really bad” drugs such as heroin, cocaine, and methamphetamine. Such sentiments indicated that participants viewed other Class A drugs as very harmful to both individuals and society, and that other people equated psychedelics to these highly stigmatised drugs. Despite viewing this perspective to be prevalent within society, the participants did not agree, often stating that they perceived psychedelics to be much safer.

The pervasive historic stigma surrounding psychedelic use and users was considered still very much prevalent today. An inability to be open about use was common, with fear that any conversation would cause anger and just “end in an argument” (B2). Participants thought that others would view them as “unprofessional” (B2) and “crazy” (A2) for using psychedelics, attitudes that they thought had stemmed from the War on Drugs and associated stigma. Participants viewed these attitudes as harmful in that they induce unnecessary guilt and shame in users – when they perceived that use was merely a personal choice that they should not be judged for. It was frequently mentioned that participants viewed their own use as non-problematic and “fun,” creating dissonance with those around them.

### ***Theme 2: knowledge is key, but not everyone has it***

Participants perceived there to be a lack of legitimate, validated information about psychedelics available to those with first-hand experience, therefore limiting the knowledge available to them. “I don’t actually know who’s like, in charge of making sure that all of the information is legit, like, it’s better than nothing.” (B2). “Do I trust shit online? Do I not?” (H2). Participants acknowledged difficulty assessing the reliability of both the source of information, and the information itself, limiting the level of knowledge participants had regarding the substances they were (and continue) taking. Additionally, “there aren’t really any studies being done [...] about any sort of actual numbers on people that might, you know, experience like psychosis or something like that” (G2). The potential risks that might occur from psychedelics were unclear to participants. Participants expressed how they struggled to find information prior to a psychedelic experience that would educate them about how a bad experience might occur, and what they might do to remedy this.

Despite this, participants sought information based on other user’s experiences and their opinions from online resources such as Reddit, Facebook, and YouTube. Therefore knowledge was often only gained *after* the individual’s first psychedelic

experience, indicating general naivety associated with initial consumption. This was described as problematic as set and setting factors were not often well considered. Participant's personal attitudes towards finding out more about psychedelics often increased with experience, however they did not always view others as thinking this way. "There's so much more information on here now and people's knowledge of it has not grown proportionally with what we actually know." (D1). Here, D1 stressed that it is not a lack of research that limits users of psychedelics, but rather a lack of accessibility to information and therefore accurate education on the topic. Greater information accessibility and the subsequent knowledge are seen as harm reduction tools that would beneficially inform users prior to a psychedelic experience:

I feel like you could also implement it into like, schools, and stuff like a lot more, I feel like we didn't really get taught a whole lot, at like high school [...]. There's a lot of information online but maybe teaching someone at school about it. (G3)

Having accurate, reliable information about psychedelics was thought to best be implemented in school systems, in particular having "more of this kind of education in high schools" (B2) – referring to more education on safe psychedelic/drug use provided in schools. Education of the current research and available information was commonly expressed as a potential solution to the prevailing lack of knowledge, and as an important harm reduction strategy. This was said to ensure that legitimate information could be spread, such that individuals who were motivated to take psychedelics could do so in an informed way, taking principles like mindset and environment into account. Participants perceived that increases in personal knowledge would also help educate those opposed to psychedelics by addressing misinformation, increasing general knowledge and ideally, reducing stigma towards the substances.

### *Theme 3: prohibition is not working, policy needs to change*

When talking about the legal status of psychedelic substances, participants commonly described the ineffectiveness of prohibition. The prevalence of use, and attitudes that "if people want it, they're gonna get it no matter what" (C1) indicated psychedelic popularity and ease of access to these illicit substances. Despite participants perceiving high prevalence of use amongst their peers and wider society, they often expressed concerns regarding the sourcing of psychedelic drugs and their safety in this endeavour. Safety concerns included uncertainty around what was in their substances and reflections about whether they trusted their source were common. Participants viewed the lack of regulation surrounding psychedelics as negatively influencing confidence in drug purity and dosage – increasing potential risks and harms. For example, taking too high a dosage can "completely fuck your whole mental state really, really, badly" (C1).

A change in policy would give a way to regulate distribution and use and "control what gets through the system" (G1). Participants perceived that the current laws surrounding psychedelics were not justified by "really any good scientific reason" (B2) and that the "illegal status does a lot of harm, because it certainly is very conducive to user error" (B2). Together, participants perceived prohibition as doing more harm than good for the people who use psychedelic substances.

Most participants expressed a desire for policy change, whether this be decriminalisation or legalisation. Although support for change was common, some individuals expressed concerns about how this change could be enacted. "I think legalisation would be good, but I cannot possibly think of a way in which legalisation would be implemented." (D1). While support for change in policy was clear, participants had little faith in Aotearoa's Government and legal systems' ability to execute such a change. Participants viewed the misinformation as having infiltrated individuals in these decision-making positions resulting in policy that is not based on the research. Participants also anticipated a largely negative public backlash



if any policy change were to go ahead, causing tension between government and public – adding to the difficulties of potential legislation change. Participants’ attitudes were generally that a policy change would be more beneficial than the current prohibition laws; legalisation could reduce harm and increase safety through dosage and quality control measures – “it’d be safe and the correct stuff” (C1). Additionally, minimum age requirements could be enforced to ensure individuals consuming psychedelics had the developmental maturity and reduce concerns about potential impacts on brain development:

From like a brain development perspective, it’s probably never great to be like, just adding things in willy-nilly while brains are developing. And yeah, I totally agree with that, I think 21 was how old I was [...] that was probably like a good age to be able to understand what was happening and not be being silly with it. (B2)

#### ***Theme 4: psychedelics have therapeutic potential***

Individuals perceived psychedelics to have therapeutic uses, often referring to articles or news segments regarding the latest research on their potential benefits. These included treatment for anxiety, depression, PTSD, addiction and other forms of trauma such as terminal illness. Despite being perceived as “incredibly effective” (F2) and having a “huge benefit” (C1), the standard for clinical use for these substances was regarded as unfair:

We are too stuck on like, needing a therapy or a medication to work like, for like, 100% of people 80% of people before we’re like, yeah, that is like working [...]. We know that antidepressants work for like such a slim amount of people. And yet, we still prescribe those all the time [...]. The like, the burden of proof is so high for like other therapies or psychedelic assisted therapy and like, well if it works for like 50% of people or like, even 20% of people then surely that’s just something that we’re kind of adding to the list of things that might be useful in some time. (B2)

This quote highlighted a general sentiment that participants perceived the benefits of psychedelics to not be well acknowledged within the medical field or translated well into therapeutic practice, and that medical professionals involved often lacked sufficient motivation to drive for psychedelics to be included within their therapeutic repertoire. Participants commonly expressed dissatisfaction about the lack of therapeutic utilisation of psychedelics and commented on their perceived effectiveness compared to traditional Western medicines. Psychedelics were perceived as having “less side effects” (A1) than typical antidepressants and anti-anxiety medication, and the general attitude was that psychedelics should be considered as a valid treatment for mental illnesses such as depression and anxiety:

I think it’s just like another one of those drugs that they haven’t looked at, like it’s another way to treat people, it’s just like another, another tool in the toolbox I think, for like any kind of like, practitioner. (G1)

Attitudes surrounding the therapeutic potential of psychedelics also came from firsthand experiences. Two participants explicitly indicated using psychedelics specifically for therapeutic purposes – such as managing anxiety, chronic pain, or to augment other substances. Despite other participants not always intentionally seeking out therapeutic effects in their psychedelic experiences, it was common for them to report positive effects; these included feeling less anxious, less reliant on other substances, more connected to nature, and generally in a better frame of mind following an experience. These effects generally came from positive experiences, indicating a potentially inherent therapeutic effect of the substances; participants commonly reported an increase in feelings of peace, connection and being “plugged in” (A1) following a psychedelic experience. Specific therapeutic experiences also occurred long term; “psychedelics is what got me off antidepressants” (C1) with “none of the physical withdrawals, no mental withdrawals” (C1).

Other individuals also reported having various beneficial experiences; this included treatment of anxiety, quitting other illicit substances, managing chronic pain, and treating depression. Participants appreciated the “metaphorical mirror” (H2) that led to increased reflection and greater introspection when using the substances, which they viewed as a potentially beneficial aspect of psychedelic use in therapeutic contexts. Overall, participants viewed psychedelics to have substantial therapeutic effects, that they either experienced personally or felt were validated by the literature. After experiencing these effects, themselves, some participants clearly communicated a greater desire for use in therapeutic contexts, recognising their potential for use for others suffering with mental illnesses.

## Discussion

The present study investigated the current attitudes and perceptions of a small group of individuals with psychedelic drug experience regarding these drugs and their use in Aotearoa. The perspectives of the current sample became apparent through four key themes:

1. a negative historical influence on the current perceptions of psychedelics;
2. knowledge is key but not everyone has it;
3. prohibition is not working; policy needs to change; and
4. psychedelics have therapeutic potential.

To the best of the authors’ knowledge, this is the first study to qualitatively explore user perspectives surrounding psychedelic drugs outside of a therapeutic context in Aotearoa. Previous investigations of attitude and perspectives of psychedelic-assisted therapy from health-care practitioners highlighted the need for information about attitudes and perspectives of psychedelic use and experiences outside of a therapeutic context (Reynolds *et al.*, 2022). In a naturalistic context, investigations of those with first-hand experience with psychedelic drugs have been limited to their consumption motivations (Móro *et al.*, 2011), in relation to self-care (Soares *et al.*, 2022), experiences of bad trips (Gashi *et al.*, 2021), experiences of microdosing (Webb *et al.*, 2019) and in relation to psychedelic-assisted therapy (Wells *et al.*, 2024) limiting knowledge on general attitudes and perceptions towards the drugs and their use.

Although public interest in psychedelic substances is increasing (Nutt and Carhart-Harris, 2021), many misconceptions still exist, which can cause polarising opinions and beliefs. The young demographic in the current study indicated a clear interest in increasing their personal knowledge and refuting common misconceptions about the substances. Participants were motivated to learn about the real risks that can come about from psychedelic use, and in particular were interested in the not yet well-established long-term effects of use. The perceived public uncertainty regarding the safety of these substances may be compounded by different attitudes towards psychedelics from health professionals (Davis *et al.*, 2021) and the wide variety of subjective experiences of users. Additionally, psychedelics have been typically regarded in the literature as non-addictive and not having regular use patterns (O’Brien, 2006), but one participant in the current study reported a bout of frequent use where they described symptoms similar to that of addiction. Due to the common understanding of psychedelics as being non-addictive, combined with their illegal status, patterns of problematic use may go unrecognised or may be minimised. Our results, though not constituting firm evidence of abuse or dependence, nevertheless suggest the need for further exploration of problematic use patterns of psychedelics. Currently, there is a lack of clarity in the knowledge surrounding psychedelics resulting in hesitancy in trusting available information, and a general feeling of being misinformed. Comparisons were frequently drawn between the information available surrounding psychedelics and other

substances (predominantly alcohol and cannabis); and while also illegal, the latter substances were perceived as having both higher quality and quantity of information available, highlighting a lack of and a desire for, accurate information on psychedelic use (Kruger *et al.*, 2023).

Despite recent increases in research into psychedelic use (Andersen *et al.*, 2021; Garcia-Romeu and Richards, 2018; Gukasyan *et al.*, 2022) and statistics indicating that casual use in Aotearoa is not uncommon (Ministry of Health, 2022), limited literature concerns use outside of therapeutic contexts. This clearly highlights the importance of improving research regarding naturalistic use, but also for developing education programs regarding safer psychedelic consumption practices. The prevalent attitude was that an increase in education regarding psychedelics was not optional in the future. Further research into how this might be implemented is important in the context of Aotearoa – perhaps taking ideas from success overseas (Gonçalves *et al.*, 2015) as there is currently no standard implementation of drug education across the country (Tūturu, 2023). Increases in education and harm reduction information provisions to address the apparent lack of knowledge would benefit both prospective and current psychedelic consumers and reduce the risk of harm associated with the substances.

Participants commonly acknowledged the therapeutic potential of psychedelics. In contrast, they perceived that health-care professionals that would be involved in this treatment to be less optimistic about this potential. This is consistent with recent research showing that professionals are cautious about psychedelics and worry about potential risks (Barnett *et al.*, 2018; Corrigan *et al.*, 2022; Davis *et al.*, 2021; Hearn *et al.*, 2022). With the escalating prospects of psychedelic-assisted therapy, inclusion and acceptance of this practice may be affected by these differing views of the substances and standards of evidence – an issue recently made salient following changes related to the therapeutic use of psilocybin in Australia (Kisley, 2023). Those who have used psychedelics in legal therapeutic settings indicated that at times they did feel judged for being in that situation, indicating that stigma can lead to even legal environments that do not always feel accepting and safe (Wells *et al.*, 2024). While some users have experienced therapeutic benefits from their use of psychedelics, these need to be further explored and understood, as greater understanding of these experiences can positively contribute to the discourse surrounding treatment and further inform future research and health care professionals.

Participants often recalled that their positive attitudes towards therapeutic use of psychedelics came from personal experience, such as treatment of anxiety and depression or quitting problematic substance use. It is important to note that although these reports were considered accurate representations of participants' reality, they were subjective therapeutic effects. Although these effects cannot be confirmed, the benefits that participants experienced are indicative of the positive effects that may come about from these substances.

Feelings of stigmatisation and judgement about psychedelic use were evident across all groups in the current study. At a personal level, drug stigma negatively affects mental health (Young *et al.*, 2005) and physical health (Ahern *et al.*, 2007). At an interpersonal level, stigma results in reluctance to be honest with loved ones about use, creating a dissonance within social circles. At a societal level, participants perceived that if they were open about their use, they could be recipients of unfair targeting and have their access to certain health care limited (Room, 2005). These effects may be more harmful than the substances themselves, which have been consistently rated by experts as being of relatively low harm, especially when compared to other commonly consumed drugs like alcohol or cannabis (Crossin *et al.*, 2022; Nutt *et al.*, 2010; Schlag *et al.*, 2022). It should be noted, however, that the recent drug harm ranking study in Aotearoa did not adjust scores based on prevalence of use, thus to the extent that prevalence estimates are not reflective of actual use rates, harms may be underestimated (Crossin *et al.*, 2022). In addition, harm estimates based on prevalence may lead to discounting some types of harms due to relatively lower harms

produced by psychedelics relative to more commonly used drugs. Lesser known and acknowledged substances may elicit stigma (Deen *et al.*, 2021) which can exacerbate harms – due to misinformed consumption practices or reduced help-seeking behaviours. Societal stigma is indeed common for psychoactive drugs, and this plays out negatively for people who use drugs regarding policy (Galea and Vlahov, 2022), health care (Ahern *et al.*, 2007) and within social relationships (Room, 2005).

The current study used a small sample size of individuals with personal psychedelic experiences, in groups where prior connections were already formed. While the small sample size was effective in demonstrating the initial perceptions of those with first-hand experience, participation was limited to Ōtepoti/Dunedin. While efforts were made to ensure a range of people were included within the sample, we cannot assume that these findings reflect the views of the entire population of those who use psychedelic substances. This research provides an initial insight into the current perspectives, and it indicates avenues for further research that can build on these exploratory findings. Furthermore, while individuals' prior connections with those in their group allowed for familiarity and ability to discuss shared experiences, this also was a limitation of the current study. Prior relationships may discourage some individuals from sharing particular experiences with those who knew them. Additionally, private insights may be inhibited by the group opinion, creating pressure to conform to the majority viewpoint. Although the researchers made every effort to encourage an open and honest discussion, this cannot be guaranteed.

In conclusion, attitudes regarding psychedelic drugs and their use were perceived as still having a strong historical influence. A lack of knowledge was regarded as contributing to persisting stigma and psychedelic-related harms, which was expected to decrease through education and policy change. The benefits of psychedelics were clear but perceived not to be well recognised by health-care professionals due to pervasive misconceptions and high standards of evidence for use in therapeutic contexts. Stigma towards psychedelic drugs and their use was discussed throughout all conversations – underlying the perceived negative public attitudes towards those who use psychedelic drugs. The findings imply the need for greater drug education and increased public knowledge and awareness of psychedelics. This could be achieved through formal development of evidence-based drug education curricula focussed on harm reduction and community engagement and support for those who consume drugs – including for those in the community who may be misinformed. These strategies, among others could lead to a reduced stigma and associated harm for people who use psychedelics.

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## Supplementary material

The supplementary material for this article can be found online.

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